

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A laser-diode-pumped solid-state laser oscillator, ~~characterized by~~ comprising:

a solid-state pumping medium;

a plurality of laser diodes arranged around said solid-state pumping medium and ~~adapted~~ configured to irradiate pumping light to said solid-state pumping medium;

~~a detector~~ detection means ~~adapted~~ configured to detect a failure of a failed one of said laser ~~diode~~ diodes; and

a control means controller ~~adapted~~ configured to determine a position of said failed laser diode, ~~the failure of which is detected by~~ said detection means, and to control supply currents to other normal laser diodes, according to the position of said failed laser diode ~~whose failure occurs~~,

wherein said controller is configured to stop supply of electric current to and turn off a part or all of normal laser diodes positioned on a same plane as the position of said failed laser diode, and

wherein said same plane is perpendicular to a central longitudinal axis of said solid-state pumping medium.

2. (canceled)

3. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 21, wherein characterized in that:

_____ said control means controller is adapted configured to stop supply of electric current to and turn off a normal laser diode provided at a position facing the position of the failed laser diode whose failure occurs in a case where a direction number of said laser diodes is even.

4. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 21, wherein characterized in that:

_____ said control means controller is adapted configured to stop supply of electric current to and turn off all of the normal laser diodes positioned on the said same plane as the position of said laser diode whose failure is caused and perpendicular to the central axis of said solid state pumping medium in a case where a direction number of said laser diodes is odd.

5. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 1, wherein characterized in that:

_____ said detection means detector is provided between electrodes of said failed laser diode and is adapted configured to detect the failure of said failed laser diode according to a voltage between said electrodes of said failed laser diode.

6. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 21, wherein characterized in that:

_____ said control meanscontroller is adaptedconfigured to short-circuit between electrodes of said failed laser diode and to bypass electric current flowing throughto said failed laser diode by controlling a bypass meanscircuit provided between said electrodes of said failed laser diode.

7. (currently amended): The laser-diode-pumped solid-state laser oscillator according to claim 1, characterized by includingfurther comprising an:

_____ adjusteringmeans adaptedconfigured to detect power of an outputted laser beam and to adjust an amount of electric power supplied to said normal laser diodes so as to obtain desired laser beam power.

8. (currently amended) The laser-diode-pumped solid-state laser oscillator according to claim 1, further comprisingcharacterized in that:

_____ a plurality of cavities, each of which is a combination ofcomprises said solid-state pumping medium and a plurality of said laser diodes,

_____ wherein the plurality of cavities -are arranged on a same optical axis of a laser beam to thereby obtain a laser output.

9. (currently amended) A method of controlling laser diodes of a laser-diode-pumped solid-state laser oscillator adaptedconfigured to pump a solid-state pumping medium by pumping light outputted from said laser diodes to obtain a laser output, characterized by the method comprising the stepsoperations of:

detecting a failure of a failed one of said laser diodes;

determining a position of said failed laser diode ~~the failure of which occurs~~;
selecting a laser diode, which is to be turned off, according to the determined position;
turning off said selected laser diode; and
adjusting a laser output, which is changed by turning off said selected laser diode, to a
desired laser output,

wherein said operation of selecting said laser diode comprises selecting a part or all of
normal laser diodes positioned on a same plane as the position of said failed laser diode, and

wherein said same plane is perpendicular to a central longitudinal axis of said solid-state
pumping medium.

10. (canceled)

11. (currently amended) The method of controlling laser diodes according to claim 9,

wherein characterized in that:

— said stepoperation of selecting said laser diode ~~is adapted~~comprises to selectselecting a
normal laser diode provided at a position facing the position of said failed laser diode ~~whose~~
~~failure occurs~~ in a case where a direction number of said laser diodes is even.

12. (currently amended) The method of controlling laser diodes according to claim 9,

wherein characterized in that:

_____ said step~~operation~~ of selecting said laser diode is ~~adapted to~~comprises step~~stopping~~ supply of electric current to and ~~turn~~turning off all ~~of~~ normal laser diodes positioned on ~~the~~ same plane as the position of said failed laser diode ~~whose failure is caused~~, and

_____ wherein said same plane is perpendicular to ~~the~~ a central longitudinal axis of said solid-state pumping medium in a case where a direction number of said laser diodes is odd.

13. (new): A laser-diode-pumped solid-state laser oscillator comprising:
 - a solid-state pumping medium;
 - a plurality of laser diodes arranged around said solid-state pumping medium and configured to irradiate pumping light to said solid-state pumping medium;
 - a detector configured to detect a failure of a failed one of said laser diodes; and
 - a controller configured to determine a direction from which said failed laser diode irradiated pumping light to said solid-state pumping medium, and to control supply currents to other normal laser diodes, according to the determined direction,

wherein said controller is configured to stop supply of electric current to and turn off a part or all of normal laser diodes positioned on a same plane as the direction from which said failed laser diode irradiated pumping light to said solid-state pumping medium, and

wherein said same plane is perpendicular to a central longitudinal axis of said solid-state pumping medium.